

**Emergency Rule**  
LSA Document #09-699(E)

DIGEST

Temporarily adds new provisions to address volatile organic compounds (VOC) reasonably available control technology (RACT) in Lake County and Porter County for industrial wastewater operations. Authority: [IC 4-22-2-37.1\(a\)\(13\)](#). Effective September 3, 2009.

**SECTION 1. Applicability. (a) This document applies to any source that generates process wastewater and meets all of the following criteria:**

- (1) Is located in Lake County or Porter County.**
- (2) Has the combined total potential to emit VOC emissions equal to or greater than one hundred (100) tons per year from all of the following:**
  - (A) Industrial wastewater sources (all waste management units).**
  - (B) All noncontrol technique guideline (non-CTG) sources.**
  - (C) Unregulated emissions from CTG emission units, except emission units regulated under 40 CFR 60, Subpart BBB\*; 40 CFR 60, Subpart III\*; 40 CFR 60, Subpart NNN\*; or 40 CFR 63, Subpart T\*.**
- (3) Has facility operations specifically listed under any of the following industrial categories:**
  - (A) Organic chemicals, plastics, and synthetic fibers manufacturing industry under Standard Industrial Classification (SIC) codes 2821, 2823, 2824, 2865, and 2869.**
  - (B) Pharmaceutical industry under SIC codes 2833, 2834, and 2836.**
  - (C) Pesticide manufacturing industry under SIC code 2879.**
  - (D) Hazardous waste treatment, storage, and disposal facilities under SIC codes 4952, 4953, and 4959.**

**(b) If a source meets the applicability requirements under subsection (a), but reduces its potential to emit for VOCs by means of federally enforceable operational restrictions (for example, production, hours of operation, or capacity utilization) to less than one hundred (100) tons per year by April 1, 2011, the source is not subject to the emission control requirements of SECTION 3 of this document.**

**(c) For purposes of subsection (a), an emission unit shall be considered regulated by a rule, section, or subpart if it is subject to the limits of that rule, section, or subpart. An emission unit is not considered regulated by a rule, section, or subpart if it is not subject to the limits of that rule, section, or subpart. For example, if the emission unit is covered by an exemption in the rule, section, or subpart, or the applicability criteria of the rule, section, or subpart are not met, then the source is not subject to the rule, section, or subpart. An emission unit is also not considered regulated if there is no rule contained in [326 IAC 8](#) regulating the source category.**

**SECTION 2. Definitions. The following definitions apply throughout this document:**

- (1) "Affected residual" means a residual that is removed from an affected VOC wastewater stream.**
- (2) "Affected VOC" means VOC with a Henry's Law Constant greater than or equal to  $1.8 \times 10^{-6}$  atm-m<sup>3</sup>/mole (0.1y/x) at twenty-five (25) degrees Celsius.**
- (3) "Affected VOC wastewater stream" means the following:**
  - (A) A process wastewater stream from a process unit at an affected industrial category with either an annual average concentration of affected VOC greater than or equal to:**
    - (i) ten thousand (10,000) parts per million by weight (ppmw); or**
    - (ii) one thousand (1,000) ppmw and an annual average flow rate greater than or equal to ten and zero-tenths (10.0) liters per minute (two and sixty-four hundredths (2.64) gallons per minute), as determined in accordance with SECTION 9 of this document.**
  - (B) The term does not include the following:**
    - (i) Maintenance wastewaters.**
    - (ii) Stormwater from segregated sewers.**
    - (iii) Water from firefighting and deluge systems.**
    - (iv) Spills.**
    - (v) Water from safety showers.**
    - (vi) Samples of a size not greater than reasonably necessary for the method of analysis that is used.**
    - (vii) Equipment leaks.**

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- (viii) Wastewater drips from procedures such as disconnecting hoses after cleaning lines.
  - (ix) Noncontact cooling water.
- (4) "Annual average concentration" means the flow-weighted annual average concentration, as determined according to the procedures specified in 40 CFR 60.782(b)\*.
- (5) "Annual average flow rate" means the annual average flow rate, as determined according to the procedures specified in SECTION 9 of this document.
- (6) "Closed biological treatment process" means a tank or surface impoundment where biological treatment occurs and VOC emissions from the treatment process are routed either to a control device by means of a closed vent system or to a fuel gas system by means of hard-piping. The tank or surface impoundment has a fixed roof, as defined in this document, or a floating flexible membrane cover that meets the requirements specified in SECTION 9 of this document.
- (7) "Closed-vent system" means a system that:
- (A) is not open to the atmosphere; and
  - (B) is composed of:
    - (i) hard-piping;
    - (ii) ductwork;
    - (iii) connections; and
    - (iv) if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device.
- (8) "Combustion device" means an individual unit of equipment, such as a:
- (A) flare;
  - (B) incinerator;
  - (C) process heater; or
  - (D) boiler;
- used for the combustion of VOC emissions.
- (9) "Continuously monitor and record" means to measure data values of a parameter at least once every fifteen (15) minutes and to record either each measured data value or block average values for a fifteen (15) minute or shorter time period. A block average value is the average of all measured data values during the time period or, if data values are measured more frequently than once per minute, the average of measured data values taken at least once per minute during the time period.
- (10) "Continuous seal" means a seal that forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the floating roof. A continuous seal may be a:
- (A) vapor-mounted seal;
  - (B) liquid-mounted seal; or
  - (C) metallic shoe seal.
- A continuous seal may be constructed of fastened segments so as to form a continuous seal.
- (11) "Control device" means any of the following:
- (A) Combustion device.
  - (B) Recovery device for vapor vents.
  - (C) Recapture device.
- Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For a steam stripper, a primary condenser is not considered a control device.
- (12) "Cover" means the following:
- (A) A device or system that is placed on or over a waste management unit containing wastewater or residuals so that the entire surface area is enclosed to minimize air VOC emissions.
  - (B) A cover may have openings necessary for operation, inspection, and maintenance of the waste management unit, such as:
    - (i) access hatches;
    - (ii) sampling ports; and
    - (iii) gauge wells;provided that each opening is closed when not in use.
  - (C) The following are examples of covers:
    - (i) A fixed roof installed on a wastewater tank.
    - (ii) A lid installed on a container.
    - (iii) An air-supported enclosure installed over a waste management unit.
- (13) "Ductwork" means a conveyance system such as those commonly used for heating and ventilation systems. It often:
- (A) is made of sheet metal; and
  - (B) has sections connected by screws or crimping.
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Hard-piping is not ductwork.

(14) "Enhanced biological treatment process" means the following:

(A) An aerated, thoroughly mixed treatment unit or units that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit.

(B) The mixed liquor volatile suspended solids (biomass) is greater than one (1) kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit or units by either submerged air flow or mechanical agitation.

(C) A thoroughly mixed treatment unit is a unit that is designed and operated to approach or achieve uniform biomass distribution and organic compound concentration throughout the aeration unit by quickly dispersing the recycled biomass and the wastewater entering the unit.

(15) "External floating roof" means a pontoon-type or double-deck-type cover that rests on the liquid surface in a storage vessel or waste management unit with no fixed roof.

(16) "Fixed roof" means a cover that:

(A) is mounted on a waste management unit or storage vessel in a stationary manner; and

(B) does not move with fluctuations in liquid level.

(17) "Floating roof" means a cover:

(A) consisting of a:

(i) double deck;

(ii) pontoon single deck;

(iii) internal floating cover; or

(iv) covered floating roof;

that rests upon and is supported by the liquid being contained; and

(B) that is equipped with a closure seal or seals to close the space between the roof edge and waste management unit.

(18) "Fr" means fraction removed value for VOC, unitless.

(19) "Fuel gas system" means the off-site and on-site piping and control system that gathers gaseous stream or streams generated by on-site operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination.

(20) "Hard-piping" means pipe or tubing.

(21) "Incinerator" means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one (1) manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas. The energy recovery section limitation does not apply to an energy recovery section used solely to preheat the incoming vent stream or combustion air.

(22) "Individual drain system" means the stationary system used to convey wastewater streams or residuals to a waste management unit or to discharge or disposal. The term includes:

(A) hard-piping;

(B) all process drains and junction boxes, together with their associated sewer lines and other junction boxes;

(C) manholes;

(D) sumps and lift stations;

(E) conveying wastewater streams; or

(F) residuals.

The term does not include a segregated storm water sewer system, which is a drain and collection system designed and operated for the sole purpose of collecting rainfall-runoff at a source, and which is segregated from all other individual drain systems.

(23) "Internal floating roof" means a cover that rests or floats on the liquid surface, but not necessarily in complete contact with it, inside a waste management unit that has a fixed roof.

(24) "Junction box" means a manhole or a lift station or access point to a wastewater sewer line.

(25) "Liquid-mounted seal" means a foam or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel or waste management unit and the floating roof. The seal is mounted continuously around the circumference of the vessel or unit.

(26) "Maintenance wastewater" means wastewater generated by the draining of process fluid from components in the process unit into an individual drain system prior to or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Any generation of wastewater that is routine or is generated by designed manufacturing processes is not maintenance wastewater. Examples of

activities that can generate maintenance wastewaters include the following:

- (A) Descaling heat exchanger tubing bundles.
- (B) Cleaning of distillation column traps.
- (C) Draining of low legs and high point bleeds.
- (D) Draining of pumps into an individual drain system.
- (E) Draining of portions of the process unit for repair.

(27) "Mechanical shoe seal" or "metallic shoe seal" means metal sheets that are held vertically against the wall of the storage vessel by:

- (A) springs;
- (B) weighted levers; or
- (C) other mechanisms;

and connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(28) "Oil-water separator" or "organic-water separator" means the following:

- (A) A waste management unit used to separate oil or organics from water.
- (B) An oil-water or organic-water separator consists of not only the separation unit but also the forebay and other separator basins:
  - (i) skimmers;
  - (ii) weirs;
  - (iii) grit chambers; and
  - (iv) sludge hoppers;

and bar screens that are located directly after the individual drain system and prior to additional treatment units such as an air flotation unit clarifier or biological treatment unit.

(C) Examples of an oil-water or organic-water separator include, but are not limited to:

- (i) an American Petroleum Institute separator;
- (ii) a parallel-plate interceptor; or
- (iii) a corrugated-plate interceptor with the associated ancillary equipment.

(29) "Open biological treatment process" means a biological treatment process that is not a closed biological treatment process as defined in this document.

(30) "Point of determination" means each point where process wastewater exits a process unit.

(31) "Point of generation" means the location where process wastewater exits a process unit.

(32) "Pressure relief valve" means a valve used only to release an unplanned, nonroutine discharge.

A relief valve discharge can result from:

- (A) an operator error;
- (B) a malfunction, such as a power failure or equipment failure; or
- (C) another unexpected cause;

that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

(33) "Process drain" means any opening (including a covered or controlled opening) that is installed or used to receive or convey wastewater into the wastewater system.

(34) "Process unit" means the smallest set of process equipment that:

- (A) can operate independently; and
- (B) includes all operations necessary to achieve its process objective.

(35) "Process wastewater" means the following:

(A) Wastewater that during manufacturing or processing comes into direct contact with or results from the production or use of any:

- (i) raw material;
- (ii) intermediate product;
- (iii) finished product;
- (iv) byproduct; or
- (v) waste product.

(B) The term includes, but is not limited to, the following:

- (i) Product tank drawdown or feed tank drawdown.
- (ii) Water formed during a chemical reaction or used as a reactant.
- (iii) Water used to wash impurities from organic products or reactants.
- (iv) Water used to cool or quench organic vapor streams through direct contact.
- (v) Condensed steam from jet ejector systems pulling vacuum on vessels containing organics.

(36) "RCRA" means the Resource Conservation and Recovery Act.

(37) "Recapture device" means the following:

- (A) An individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals

primarily for disposal.

(B) Recapture devices include, but are not limited to, the following:

- (i) Absorbers.
- (ii) Carbon adsorbers.
- (iii) Condensers.

(38) "Recovery device" means the following:

(A) An individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (for example, net positive heating value), use, reuse, or for sale for fuel value, use, or reuse.

(B) Examples of equipment that may be recovery devices include the following:

- (i) Absorbers.
- (ii) Carbon adsorbers.
- (iii) Condensers.
- (iv) Oil-water separators or organic-water separators.
- (v) Organic removal devices, such as the following:
  - (AA) Decanters.
  - (BB) Strippers.
  - (CC) Thin-film evaporation units.

(C) For purposes of the monitoring, record keeping, and reporting requirements of this document, recapture devices are considered recovery devices.

(39) "Residual" means the following:

(A) Any liquid or solid material containing VOC that is removed from a wastewater stream by a waste management unit or treatment process that does not destroy organic compounds (nondestructive unit).

(B) Examples of residuals from nondestructive wastewater management units are the following:

- (i) The organic layer and bottom residue removed by a decanter or organic-water separator.
- (ii) The overheads from a steam stripper or air stripper.

(C) Examples of materials that are not residuals are:

- (i) silt;
- (ii) mud;
- (iii) leaves;
- (iv) bottoms from a steam stripper or air stripper; and
- (v) sludges, ash, or other materials;

removed from wastewater being treated by destructive devices such as biological treatment units and incinerators.

(40) "Sewer line" means a lateral, trunk line, branch line, or other conduit including, but not limited to, grates and trenches, used to convey wastewater streams or residuals to a downstream waste management unit.

(41) "Single-seal system" means a floating roof having one (1) continuous seal that completely covers the space between the wall of the storage vessel and the edge of the floating roof. The seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal.

(42) "Steam jet ejector" means a steam nozzle that discharges a high-velocity jet across a suction chamber that is connected to the equipment to be evacuated.

(43) "Steam stripper" means a column including:

- (A) associated stripper feed tanks;
- (B) condensers; or
- (C) heat exchangers;

used to remove compounds from wastewater.

(44) "Surface impoundment" means the following:

(A) A waste management unit that is a:

- (i) natural topographic depression;
- (ii) man-made excavation; or
- (iii) diked area formed primarily of earthen materials (although it may be lined with man-made materials);

designed to hold an accumulation of liquid wastes or waste containing free liquids.

(B) A surface impoundment is used for the purpose of treating, storing, or disposing of wastewater or residuals and is not an injection well.

(C) Examples of surface impoundments are the following:

- (i) Equalization.
- (ii) Settling and aeration pits.
- (iii) Ponds.

(iv) Lagoons.

(45) "Tank drawdown" means any material or mixture of materials discharged from a product tank, feed tank, or intermediate tank for the purpose of removing water or other contaminants from the tank.

(46) "Temperature monitoring device" means a unit of equipment used to monitor temperature and having a minimum accuracy of:

(A) plus or minus one percent (1%) of the temperature being monitored expressed in degrees Celsius; or

(B) plus or minus five-tenths (0.5) degree Celsius;

whichever number is greater, for example, has the highest absolute value.

(47) "Treatment process" means a specific technique that removes or destroys the organics in a wastewater or residual stream, such as:

(A) a steam stripping unit (steam stripper);

(B) a thin-film evaporation unit;

(C) a waste incinerator;

(D) a biological treatment unit; or

(E) any other process applied to wastewater streams or residuals;

to comply with SECTION 4(h) or 5 of this document. Most treatment processes are conducted in tanks. Treatment processes are a subset of waste management units.

(48) "Vapor-mounted seal" means a continuous seal that:

(A) completely covers the annular space between the wall of the storage vessel or waste management unit and the edge of the floating roof; and

(B) is mounted such that there is a vapor space between the stored liquid and the bottom of the seal.

(49) "Waste management unit" means the following:

(A) Equipment, a structure or structures, or a device or devices used to convey, store, treat, or dispose of wastewater streams or residuals.

(B) Examples of waste management units include the following:

(i) Wastewater tanks.

(ii) Surface impoundments.

(iii) Individual drain systems.

(iv) Biological wastewater treatment units.

(C) Examples of equipment that may be waste management units include the following:

(i) Containers.

(ii) Air flotation units.

(iii) Oil-water separators or organic-waste separators.

(iv) Organic removal devices such as:

(AA) decanters;

(BB) strippers; or

(CC) thin-film evaporation units.

(D) If such equipment is used for recovery, then it is part of a process unit and is not a waste management unit.

(50) "Wastewater stream" means a stream that contains process wastewater.

(51) "Wastewater tank" means a stationary waste management unit that is:

(A) designed to contain an accumulation of wastewater or residuals; and

(B) constructed primarily of nonearthen materials, for example, wood, concrete, steel, or plastic, that provide structural support.

The term includes wastewater tanks used for flow equalization.

(52) "Water seal controls" means:

(A) a seal pot;

(B) a p-leg trap; or

(C) another type of trap filled with water;

for example, flooded sewers that maintain water levels adequate to prevent air flow through the system, that creates a water barrier between the water level of the seal and the atmosphere. The water level of the seal must be maintained in the vertical leg of a drain in order to be considered a water seal.

(53) "Wet weather retention basin" means an impoundment or tank that is used to store rainfall runoff that would exceed the capacity of the wastewater treatment system until it can be returned to the wastewater treatment system or, if the water meets the applicable discharge limits, discharged without treatment. These units may also be used to store wastewater during periods when the wastewater treatment system is shut down for maintenance or emergencies.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

**SECTION 3. Overall requirements for industrial wastewater.** The owner or operator of a source subject to this document shall ensure that all of the following are met:

- (1) Except as otherwise exempted under subdivision (2), the owner or operator of a source that meets the applicability criteria in SECTION 1 of this document shall comply with the requirements in SECTIONS 4 through 12 of this document.
- (2) The following exemptions apply:
  - (A) Any source with an annual affected VOC loading in wastewater, as determined in accordance with SECTION 9 of this document, less than or equal to ten (10) megagrams (eleven and three-hundredths (11.03) tons) is exempt from the control requirements of SECTION 4 of this document.
  - (B) At any source with an annual affected VOC loading in wastewater, as determined in accordance with SECTION 9 of this document, greater than ten (10) megagrams (eleven and three-hundredths (11.03) tons), the owner or operator of the source may exempt from the control requirements of SECTION 4 of this document one (1) or more affected VOC wastewater streams for which the sum of the annual VOC loading in wastewater for all of the exempted streams is less than or equal to ten (10) megagrams (eleven and three-hundredths (11.03) tons).
  - (C) If compliance with the control requirements of SECTION 4 of this document would create a safety hazard in a waste management unit, the owner or operator may request U.S. EPA to exempt that waste management unit from the control requirements of SECTION 4 of this document. U.S. EPA shall approve the request if justified by the likelihood and magnitude of the potential injury and if U.S. EPA determines that reducing or eliminating the hazard is technologically or economically unreasonable. The approval shall occur when the department is informed, in writing, that U.S. EPA has no objections to this exemption.
  - (D) Wet weather retention basins are exempt from the requirements of this document.

**SECTION 4. Control requirements for process wastewater.** (a) Any waste management unit that receives, manages, or treats an affected VOC wastewater stream or affected residual shall be controlled in accordance with:

- (1) this SECTION; or
- (2) one (1) of the alternate methods of control listed in SECTION 5 of this document.

(b) The control requirements apply from the point of generation of an affected VOC wastewater stream until the affected VOC wastewater stream, including any affected residual, is either returned to a process unit or treated in accordance with subsection (h).

(c) For each individual drain system that receives or manages an affected VOC wastewater stream or an affected residual, the owner or operator shall comply with the following requirements:

- (1) The owner or operator shall operate and maintain on each opening in the individual drain system a cover and, if vented, route the vapors to a process or through a closed vent system to a control device as follows:
  - (A) The cover and all openings shall be maintained in a closed position at all times that an affected VOC wastewater stream or an affected residual is in the drain system except when it is necessary to use the opening for sampling or removal or for equipment inspection, maintenance, or repair.
  - (B) The control device shall be designed and operated to reduce the affected VOC vented to it by at least ninety percent (90%) by weight.
  - (C) The individual drain system shall be designed and operated to segregate the vapors within the system from other drain systems and the atmosphere.
- (2) The owner or operator shall comply with following requirements:
  - (A) Each drain shall be equipped with water seal controls or a tightly fitting cap or plug.
  - (B) If a water seal is used on a drain receiving an affected VOC wastewater stream or an affected residual, the owner or operator shall either extend the pipe discharging the wastewater below the liquid surface in the water seal of the receiving drain or install a flexible shield (or other enclosure that restricts wind motion across the open area between the pipe and the drain) that encloses the space between the pipe discharging the wastewater to the drain receiving the wastewater. A water seal that is used on a hub receiving a wastewater stream that is not an affected VOC wastewater

stream or an affected residual for the purpose of eliminating cross ventilation to drains carrying an affected VOC wastewater stream or an affected residual is not required to have an extended subsurface discharging pipe or a flexible shield.

(C) Each junction box shall be equipped with a tightly fitting solid cover, for example, no visible gaps, cracks, or holes, which shall be kept in place at all times except during inspection and maintenance.

(D) If the junction box is vented, the owner or operator shall comply with one (1) of the following requirements:

(i) The junction box shall be vented to a process or through a closed vent system to a control device that is designed and operated to reduce the VOC vented to it by at least ninety percent (90%) by weight.

(ii) If the junction box is filled and emptied by gravity flow (for example, there is no pump) or is operated with no more than slight fluctuations in the liquid level, the owner or operator may vent the junction box to the atmosphere provided that the junction box complies with the following requirements:

(AA) The vent pipe shall be at least ninety (90) centimeters in length and not greater than ten and two-tenths (10.2) centimeters in nominal inside diameter.

(BB) Water seals shall be installed and maintained at the wastewater entrance or entrances to or exit from the junction box restricting ventilation in the individual drain system and between components in the individual drain system.

(E) Each sewer line shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visible gaps or cracks in joints, seals, or other emission interfaces.

(d) For each surface impoundment that receives, manages, or treats an affected VOC wastewater stream or an affected residual, the owner or operator shall comply with the following requirements:

(1) The surface impoundment shall be equipped with a cover, for example, air-supported structure or rigid cover, and a closed-vent system that routes the VOC vapors vented from the surface impoundment to a control device that meets the following requirements:

(A) Each opening, for example, access hatch, sampling port, and gauge well, shall be maintained in a closed position, for example, covered by a lid, at all times that an affected VOC wastewater stream or an affected residual is in the surface impoundment except when it is necessary to use the opening for sampling or removal or for equipment inspection, maintenance, or repair.

(B) The cover shall be used at all times that an affected VOC wastewater stream or an affected residual is in the surface impoundment except during removal of treatment residuals in accordance with 40 CFR 268.4\* or closure of the surface impoundment in accordance with 40 CFR 264.228\*.

(C) The control device shall be designed and operated to reduce the affected VOC vented to it by at least ninety percent (90%) by weight.

(2) The surface impoundment shall be equipped with a floating flexible membrane cover that meets the requirements specified in this subdivision as follows:

(A) The flexible membrane cover shall be designed to:

(i) float on the liquid surface during normal operations; and

(ii) form a continuous barrier over the entire surface area of the liquid.

(B) The flexible membrane cover shall be fabricated from a synthetic membrane material that is either a high density polyethylene with a thickness not less than two and five-tenths (2.5) millimeters (one hundred (100) mils) or a material (or a composite of different materials) determined to have both organic permeability properties that are equivalent to those of the high density polyethylene material and chemical and physical properties that maintain the material integrity for the intended service life of the material.

(C) The flexible membrane cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

(D) Except as provided for in clause (E), each opening in the flexible membrane cover shall be equipped with a closure device designed to operate such that, when the closure device is secured in the closed position, there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(E) The flexible membrane cover may be equipped with one (1) or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least ninety percent (90%) of the area of the opening or a flexible fabric sleeve seal.

(F) Whenever an affected VOC wastewater stream or an affected residual is in the surface impoundment, the flexible membrane cover shall float on the liquid and each closure device shall

be secured in the closed position. Opening of closure devices or removal of the flexible membrane cover is allowed to provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations or to remove accumulated sludge or other residues from the bottom of the surface impoundment.

(e) For each oil-water separator that receives, manages, or treats an affected VOC wastewater stream or an affected residual, the owner or operator shall comply with the following requirements:

(1) The oil-water separator shall be equipped with a fixed roof and a closed vent system that routes the vapors vented from the oil-water separator to a control device in accordance with following requirements:

(A) Each opening in the fixed roof, for example, access hatches, sampling ports, and gauge wells, shall be maintained in a closed, sealed position, for example, covered by a lid that is gasketed and latched, at all times that the oil-water separator contains an affected VOC wastewater stream or an affected residual except when it is necessary to use the opening for sampling or removal or for equipment inspection, maintenance, or repair.

(B) The control device shall be designed and operated to reduce the VOC vented to it by at least ninety percent (90%) by weight.

(2) The oil-water separator shall be equipped with a floating roof in accordance with the requirements of this subdivision as follows:

(A) The oil-water separator shall be equipped with a floating roof that has a closure device between the floating roof and the wall of the separator. For portions of the oil-water separator where it is infeasible to construct and operate a floating roof, such as over the weir mechanism, the owner or operator shall operate and maintain a fixed roof, closed vent system, and control device that meet the requirements specified in subdivision (1).

(B) The closure device shall consist of a primary seal and a secondary seal. The primary seal shall be a liquid-mounted seal or a mechanical shoe seal. The secondary seal shall be above the floating roof and cover the annular space between the floating roof and the wall of the separator.

(C) The floating roof shall be floating on the liquid, such as off the roof supports, at all times except during abnormal conditions, such as low flow rate.

(D) Except as provided for in clause (E), each opening in the floating roof shall be equipped with a gasketed cover, seal or lid, which shall be maintained in the closed position at all times, except during inspection and maintenance.

(E) The floating roof may be equipped with one (1) or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least ninety percent (90%) of the area of the opening or a flexible fabric sleeve seal.

(f) For each portable container that receives, manages, or treats an affected VOC wastewater stream or an affected residual, the owner or operator shall operate and maintain a cover on the portable container and shall comply with the requirements of this subsection as follows:

(1) The cover shall remain in place and all openings, for example, bungs, hatches, sampling ports, and pressure relief devices, shall be maintained in a closed position, for example, covered by a lid, at all times that an affected VOC wastewater stream or an affected residual is in the portable container except when it is necessary to use the opening for filling, removal, inspection, sampling, or pressure relief events related to safety considerations to prevent physical damage or permanent deformation of the portable container or cover.

(2) For portable containers with a capacity greater than or equal to one hundred ten (110) gallons, a submerged fill pipe shall be used when a container is being filled by pumping with an affected VOC wastewater stream or an affected residual. The submerged fill pipe outlet shall extend to not more than six (6) inches or within two (2) fill pipe diameters of the bottom of the container while the container is being filled.

(3) During treatment of an affected VOC wastewater stream or an affected residual, including aeration, thermal, or other treatment, in a portable container, whenever it is necessary for the container to be open, the container shall be located within an enclosure with a closed-vent system that routes the VOC vapors vented from the container to a control device. The control device shall be designed and operated to reduce the VOC vented to it by at least ninety percent (90%) by weight.

(g) For each wastewater tank that receives, manages, or treats an affected VOC wastewater stream or an affected residual, the owner or operator shall comply with the requirements of either subdivision (1) or (2) as follows:

(1) The owner or operator shall operate and maintain a fixed roof for the wastewater tank, except that if the wastewater tank meets any of the conditions in clauses (A) through (D), the owner or operator

shall operate and maintain one (1) of the emission control techniques listed in subdivision (2) as follows:

- (A) Used for heating wastewater.
- (B) Used for treating by means of an exothermic reaction.
- (C) The contents of the tank is sparged.
- (D) The wastewater tank has a capacity equal to or greater than forty thousand (40,000) gallons, and the maximum vapor pressure stored material is equal to or greater than one and five-tenths (1.5) pounds per square inch absolute.

(2) The owner or operator shall operate and maintain one (1) of the following emission control techniques:

(A) A fixed roof and a closed-vent system that routes the VOC vapors vented from the wastewater tank to a control device as follows:

- (i) Each opening in the fixed roof, for example, access hatches, sampling ports, and gauge wells, shall be maintained in a closed position, for example, covered by a lid, at all times that the wastewater tank contains an affected VOC wastewater stream or an affected residual except when it is necessary to use the opening for wastewater sampling or removal or for equipment inspection, maintenance, or repair.
- (ii) The control device shall be designed and operated to reduce the VOC vented to it by at least ninety percent (90%) by weight.

(B) A fixed roof and an internal floating roof that meets the requirements specified in this clause as follows:

- (i) The internal floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during initial fill, after the tank has been completely emptied and degassed, and when the tank is completely emptied before being subsequently refilled.
- (ii) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.
- (iii) The internal floating roof shall be equipped with a closure device between the wall of the tank and the roof edge. The closure device shall consist of a liquid-mounted seal or a metallic shoe seal, or two (2) seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous seals.
- (iv) Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.
- (v) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface.
- (vi) Each opening in the internal floating roof except for:
  - (AA) leg sleeves;
  - (BB) automatic bleeder vents;
  - (CC) rim space vents;
  - (DD) column wells;
  - (EE) ladder wells;
  - (FF) sample wells; and
  - (GG) stub drains;

shall be equipped with a cover or lid. The cover or lid shall be equipped with a gasket.

(vii) Each penetration of the internal floating roof for purposes of sampling shall be a sample well. Each sample well shall have a slit fabric cover that covers at least ninety percent (90%) of the opening.

(viii) Each automatic bleeder vent shall be gasketed.

(ix) Each rim space vent shall be gasketed.

(x) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(xi) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(xii) Each cover or lid on any opening in the internal floating roof shall be closed, such as no visible gaps, except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be airtight when they are closed.

Rim space vents are to be set to open only when the:

- (AA) internal floating roof is not floating; or
- (BB) pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(C) An external floating roof that meets the requirements specified in this clause as follows:

- (i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two (2) seals, one above the other. The lower seal (primary seal) shall be either a metallic shoe seal or a liquid-mounted seal. The upper seal (secondary seal) shall be a rim-mounted or shoe-mounted seal.
- (ii) Except during inspections, both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion.
- (iii) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in the noncontact external floating roof shall provide a projection below the liquid surface.
- (iv) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid, which is to be maintained in a closed position, such as no visible gap, at all times except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be airtight when they are closed.
- (v) Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.
- (vi) Rim space vents are to be set to open only when the:
  - (AA) roof is being floated off the roof leg supports; or
  - (BB) pressure beneath the rim seal exceeds the manufacturer's recommended setting.
- (vii) Automatic bleeder vents and rim space vents are to be gasketed.
- (viii) Each roof drain that empties into the stored liquid is to be provided with a slotted membrane fabric cover that covers at least ninety percent (90%) of the area of the opening.
- (ix) Each unslotted guide pole well shall have a gasketed sliding cover or a flexible fabric sleeve seal.
- (x) Each unslotted guide pole shall have on the end of the pole a gasketed cap that is closed at all times except when gauging the liquid level or taking liquid samples.
- (xi) Each slotted guide pole well shall have a gasketed sliding cover or a flexible fabric sleeve seal.
- (xii) Each slotted guide pole shall have a gasketed float or other device that closes off the liquid surface from the atmosphere.
- (xiii) Each gauge hatch or sample well shall have a gasketed cover that is closed at all times except when the hatch or well must be open for access.
- (xiv) The external floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the periods specified in this item as follows:
  - (AA) During the initial fill.
  - (BB) After the tank has been completely emptied and degassed.
  - (CC) When the tank is completely emptied before being subsequently filled.
- (xv) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.

(h) For each treatment process managing an affected VOC wastewater stream or an affected residual, the owner or operator shall comply with the requirements as specified in this subsection. Once an affected VOC wastewater stream or an affected residual has been treated in accordance with the requirements of this subsection, it is no longer subject to the requirements of this document as follows:

- (1) Each treatment process shall meet the applicable requirements of subsections (c) through (g).
- (2) Gases vented from a treatment process shall be routed by means of a closed vent system to a control device that is designed and operated to reduce the VOC vented to it by at least ninety percent (90%) by weight. This requirement does not apply to any open biological treatment process that meets an alternative method of control under SECTION 5 of this document. Vents from anaerobic biological treatment processes may be routed through hard-piping to a fuel gas system.
- (3) For each of the affected VOC wastewater streams that are treated in a nonbiological treatment process (or a combination of nonbiological treatment processes), the owner or operator shall, by removal or destruction, reduce the mass flow rate of affected VOC by ninety percent (90%) or more while reducing the affected VOC concentration to less than one thousand (1,000) parts per million by weight. Dilution shall not be used to achieve compliance with this subdivision. This requirement is not applicable for wastewater of residuals that comply with the requirements for RCRA treatment options specified in subdivision (6).
- (4) The owner or operator using a closed biological treatment process for at least one (1) affected VOC wastewater stream shall reduce the mass flow rate for all affected VOC from all wastewater

streams entering the biological treatment process by at least ninety percent (90%).

(5) Design steam stripper option. The owner or operator shall operate and maintain a steam stripper that meets all the requirements of this subdivision as follows:

(A) A minimum active column height of five (5) meters.

(B) A countercurrent flow configuration with a minimum of ten (10) actual trays.

(C) A minimum steam flow rate of four-hundredths (0.04) kilogram of steam per liter of wastewater feed within the column.

(D) A minimum wastewater feed temperature to the steam stripper of ninety-five (95) degrees Celsius or minimum column operating temperature of ninety-five (95) degrees Celsius.

(E) A maximum liquid loading of sixty-seven thousand one hundred (67,100) liters per hour per square meter.

(F) Operate at nominal atmospheric pressure.

(6) RCRA treatment options. The owner or operator may elect to treat the affected VOC wastewater stream or affected residual in a unit identified in, and complying with, clause (A), (B), or (C) as follows:

(A) The affected VOC wastewater stream or affected residual is discharged to a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR 270\* and complies with the requirements of 40 CFR 264, Subpart O\*, or has certified compliance with the interim status requirements of 40 CFR 265, Subpart O\*.

(B) The affected VOC wastewater stream or affected residual is discharged to a process heater or boiler burning hazardous waste for which the owner or operator has:

(i) been issued a final permit under 40 CFR 270\* and complies with the requirements of 40 CFR 266, Subpart H\*; or

(ii) certified compliance with the interim status requirements of 40 CFR 266, Subpart H\*.

(C) The affected VOC wastewater stream or affected residual is discharged to an underground injection well for which the owner or operator has been issued a final permit under 40 CFR 270\* or 40 CFR 144\* and complies with the requirements of 40 CFR 122\*. The owner or operator shall comply with all applicable requirements of 40 CFR 122\* prior to the point where the wastewater enters the underground portion of the injection well.

(7) Affected residuals. For each affected residual, the owner or operator shall control for air emissions by complying with subsections (c) through (g) and by complying with one (1) of the following requirements:

(A) Recycle the affected residual to a production process or sell the affected residual for the purpose of recycling. Once an affected residual is returned to a production process, the affected residual is no longer subject to this document.

(B) Return the affected residual to the treatment process.

(C) Treat the affected residual to destroy the total combined mass flow rate of affected VOC by ninety-nine percent (99%) or more in a nonbiological treatment process.

(D) Comply with the requirements for RCRA treatment options specified in subdivision (6).

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

**SECTION 5. Alternate methods of control.** Alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this document may be used if approved by U.S. EPA. The approval shall occur when the department is informed, in writing, that U.S. EPA has no objections to the alternate method or methods of control. The alternate methods of control are as follows:

(1) Ninety percent (90%) overall control option. As an alternative to the control requirements of SECTION 4 of this document, the owner or operator of waste management units may elect to ensure that the overall control of VOC emissions at the source from wastewater from affected source industries is at least ninety percent (90%) less than the calendar year baseline emissions inventory for VOC emissions to the ambient air from process wastewater, provided that adequate documentation is submitted that supports the accuracy of the calendar year baseline emission inventory and the following requirements are met:

(A) To qualify for the control option available under this subdivision after the effective date of this document, the owner or operator of a waste management unit for which a control plan was not previously submitted shall submit a control plan to the department that demonstrates that the overall control of VOC emissions at the source from wastewater from affected industrial categories

will be at least ninety percent (90%) less than the calendar year baseline emissions inventory. Any control plan submitted after the effective date of this document must be approved by U.S. EPA in writing before the owner or operator may use the control option available under this subdivision for compliance. At a minimum, the control plan shall include the following:

- (i) The applicable emissions unit identification.
- (ii) The source ID.
- (iii) The calendar year baseline emission rates of VOC from wastewater from applicable industrial categories (consistent with the calendar year baseline emissions inventory).
- (iv) A plot plan showing the location, the emissions unit identification, and ID associated with a waste management unit.
- (v) The VOC emission rates for the preceding calendar year.
- (vi) An explanation of the record keeping procedure and calculations that will be used to demonstrate compliance.

The VOC emission rates shall be calculated in a manner consistent with the calendar year baseline emissions inventory.

(B) The owner or operator shall submit an annual report no later than March 31 of each year to the department that demonstrates that the overall control of VOC emissions at the account from wastewater from affected industrial categories during the preceding calendar year is at least ninety percent (90%) less than the baseline emissions inventory. At a minimum, the report shall include the following:

- (i) The source ID.
- (ii) The emissions unit identification.
- (iii) The throughput of wastewater from calendar year.

The emission rates for the preceding calendar year shall be calculated in a manner consistent with the calendar year baseline emissions inventory.

(C) All representations in control plans and annual reports become enforceable conditions. No variation from such representations is allowed if the variation will cause a change in the identity of the specific emission sources being controlled or the method of control of emissions unless the owner or operator submits a revised control plan to the department not later than thirty (30) days after the change. All control plans and reports shall include documentation that the overall reduction of VOC emissions at the account from wastewater from affected source categories continues to be at least ninety percent (90%) less than the calendar year baseline emissions inventory. The emission rates shall be calculated in a manner consistent with the calendar year baseline emissions inventory.

(D) For waste management units, the calendar year baseline is 2002.

(2) The owner or operator of an affected industrial category may elect to comply with the provisions of 40 CFR 63, Subpart G\* (National Emission Standards for Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater), 40 CFR 63, Subpart JJJ\* (National Emission Standards for Hazardous Air Pollutants: Group IV Polymers and Resins), 40 CFR 63, Subpart FFFF\* (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing), or any other emission standard promulgated under 40 CFR 63 that references the wastewater control requirements set forth in 40 CFR 63, Subpart G\* if the wastewater stream is subject to the national emission standards for hazardous air pollutants control requirements for that category, as alternatives to complying with this document, provided the following:

(A) The term "affected VOC" is substituted each place that 40 CFR 63, Subpart G\*, 40 CFR 63, Subpart JJJ\*, 40 CFR 63, Subpart FFFF\*, and any other 40 CFR 63 emission standard references the term "organic hazardous air pollutant" or "organic HAP".

(B) For affected VOC not specifically listed in table 9 of 40 CFR 63, Subpart G\*, the corresponding fraction removed (Fr) value shall be determined using one (1) of the following methods:

- (i) Determine the Fr value by the procedures in 40 CFR 60, Appendix J\*, as proposed on December 9, 1998, in the Federal Register.
- (ii) Assign an Fr value of 0.99.
- (iii) Use WATER9, a wastewater treatment model of U.S. EPA, to determine the Fr value of a chemical.

(C) Before implementing the option available under this subdivision, the owner or operator provides written notice to the department of their intent to use this option.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana

**SECTION 6. Inspection and monitoring.** (a) The owner or operator of a waste management unit that is subject to requirements under SECTION 4 or 5 of this document shall comply with the inspection and monitoring requirements in subsections (b) through (f). An owner and operator choosing to comply with a subpart in 40 CFR 63 as allowed in SECTION 5(2) of this document, provided it is subject to that subpart, may comply with the inspection monitoring and record keeping requirements of the subpart instead of the requirements of this SECTION.

(b) All seals, covers, closed vent systems, and other equipment used to comply with SECTION 4 or 5 of this document (relating to control requirements) shall be visually inspected for leaks and improper condition initially, semiannually, and upon repair as specified under this subsection. If any seal, cover, closed vent system, or other equipment is found to have a leak or improper condition, a first attempt at repair shall be completed as soon as possible, but not later than fifteen (15) calendar days after detection, unless the repair or correction is technically infeasible without requiring a process unit shutdown, in which case the repair or correction shall be made at the next process unit shutdown. The visual inspection requirements are as follows:

- (1) For a wastewater tank equipped with a fixed roof and vapor control system (closed vent system and control device), visually inspect the fixed roof, openings, and the closed vent system for leaks, except for a cover and closed vent system maintained under negative pressure.
- (2) For a wastewater tank equipped with an internal or external floating roof, visually inspect for the following improper conditions:
  - (A) Leaving open any access door or other opening when the door or opening is not in use.
  - (B) The floating roof is not resting on either the surface of the liquid or on the leg supports.
  - (C) There is stored liquid on the floating roof.
  - (D) A rim seal is detached from the floating roof.
  - (E) There are holes, tears, cracks, or gaps in the rim seal or seal fabric of the floating roof.
  - (F) There are visible gaps between the seal of an internal floating roof and the wall of the wastewater tank.
  - (G) Where a metallic shoe seal is used on an external floating roof, one (1) end of the metallic shoe does not extend into the stored liquid or one (1) end of the metallic shoe does not extend a minimum vertical distance of sixty-one (61) centimeters above the surface of the stored liquid.
  - (H) A gasket, joint, lid, cover, or door has a crack or gap or is broken.
- (3) For a surface impoundment, visually inspect the cover and all openings for leaks, except for a cover and closed vent system maintained under negative pressure.
- (4) For a surface impoundment, visually inspect the following improper conditions:
  - (A) Leaving open any access hatch or other opening when the hatch or opening is not in use.
  - (B) A joint, lid, cover, or door has a crack or gap or is broken.
- (5) For a portable container, visually inspect the cover and all openings for leaks.
- (6) For a portable container that is located within an enclosure that is vented by means of a closed vent system to a control device, visually inspect the enclosure and closed vent system for leaks, except for an enclosure and closed vent system maintained under negative pressure.
- (7) For a portable container, visually inspect for the following improper conditions:
  - (A) Leaving open any access hatch or other opening when the hatch or opening is not in use.
  - (B) A cover or door has a gap or crack or is broken.
- (8) For an individual drain system, visually inspect for the following improper conditions:
  - (A) A joint, lid, cover, or door has a gap, crack, or hole or is broken.
  - (B) Leaving open any access hatch or other opening when the hatch or opening is not in use for sampling or removal or for equipment inspection, maintenance, or repair.
  - (C) Sufficient water is not present to properly maintain integrity of water seals.
  - (D) Drains using tightly-fitted caps or plugs have caps and plugs that are not in place or not properly installed.
  - (E) Junction boxes do not have covers in place or covers have visible gaps, cracks, or holes.
  - (F) Unburied portion of sewer lines have cracks or gaps.
- (9) For a junction box vented to a process or through a closed vent system to a control device, visually inspect for leaks in the closed vent system.
- (10) For oil-water separators, visually inspect fixed roof and all openings for leaks.
- (11) For oil-water separators, visually inspect for the following improper conditions:
  - (A) Leaving open or ungasketed any access door or other opening when the door or opening is not in use.
  - (B) The floating roof is not resting on either the surface of the liquid or on the leg supports.

- (C) There is stored liquid on the floating roof.
- (D) A rim seal is detached from the floating roof.
- (E) There are holes, tears, or other open spaces in the rim seal or seal fabric of the floating roof.
- (F) A gasket, joint, lid, cover, or door has a gap or crack or is broken.

(c) For a wastewater tank or oil-water separator equipped with an external floating roof having primary and secondary seals used to comply with SECTION 4 or 5 of this document, the secondary seal shall be inspected for seal gaps and repaired as follows:

- (1) The secondary seal shall be measured for seal gaps initially, annually, and after repair, as determined under [326 IAC 8-9-5\(c\)\(2\)](#).
- (2) The accumulated area of gaps that exceed one-eighth (1/8) inch (thirty-two hundredths (0.32 cm)) in width between the secondary seal and tank wall shall be not greater than one and zero-tenths (1.0) square inch per foot (twenty-one (21) square centimeters per meter) of tank diameter.
- (3) If the seal gap requirement of subdivision (2) is not being met, the secondary seal shall be repaired or replaced within forty-five (45) days after detection of the improper seal gap unless the repair or correction is technically infeasible without requiring a process unit shutdown, in which case the repair or correction shall be made at the next process unit shutdown.

(d) The following records shall be maintained on leaks, improper conditions, and improper seal gaps:

- (1) The date on which a leak, improper condition, or improper seal gap is discovered.
- (2) The date on which a first attempt at repair was made to correct the leak or improper condition.
- (3) The date on which a leak, improper condition, or improper seal gap is repaired.

(e) Monitors shall be installed and maintained as required by this subsection to measure operational parameters of any emission control device or other device installed to comply with SECTION 4 or 5 of this document. The monitoring and parameters shall be sufficient to demonstrate proper functioning of those devices to design specifications and include the monitoring and parameters listed in this subsection, as applicable, except as provided in subdivision (1), as follows:

- (1) For an enclosed noncatalytic combustion device, including, but not limited to, a thermal incinerator, boiler, or process heater, continuously monitor and record the temperature of the gas stream either in the combustion chamber or immediately downstream before any substantial heat exchange.
- (2) For a catalytic incinerator, continuously monitor and record the temperature of the gas stream immediately before and after the catalyst bed.
- (3) For a condenser (chiller), continuously monitor and record the temperature of the gas stream at the condenser exit.
- (4) For a carbon adsorber, continuously monitor and record the VOC concentration of exhaust gas stream to determine if breakthrough has occurred. If the carbon adsorber does not regenerate the carbon bed directly in the control device, for example, a carbon canister, the exhaust gas stream shall be monitored daily or at intervals not greater than twenty percent (20%) of the design replacement interval, whichever is greater, or as an alternative to conducting monitoring, the carbon may be replaced with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and the VOC concentration in the gas stream vented to the carbon adsorber.
- (5) For a flare, meet the requirements specified in 40 CFR 60.18(b)\*.
- (6) For a steam stripper, continuously monitor and record the steam flow rate, the wastewater feed mass flow rate, and either the wastewater feed temperature or the column operating temperature, such as the temperature in the column top tray liquid phase at the downcomer.
- (7) For vapor control systems other than those specified in this subsection, continuously monitor and record the appropriate operating parameters.
- (8) In lieu of the monitoring and parameters listed in this subsection, other monitoring and parameters may be approved or required by U.S. EPA. The approval or requirement shall occur when the department is informed, in writing, that U.S. EPA has no objection to, or requires, the other monitoring and parameters that are indicated.

(f) For a closed-vent system that is:

- (1) used to comply with SECTION 4 or 5 of this document; and
- (2) designed to operate at a pressure below atmospheric pressure;

the closed-vent system shall be equipped with at least one (1) pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

**SECTION 7. Approved test methods.** Compliance with the emission specifications, vapor control system efficiency, and certain control requirements, inspection requirements, and exemption criteria of SECTIONS 4 through 6 of this document and SECTION 3(2) of this document (relating to control requirements, alternate control requirements, inspection and monitoring requirements, and exemptions) shall be determined by applying one (1) or more of the following test methods and procedures, as appropriate:

- (1) Gas flow rate. U.S. EPA Methods 1, 2, 3, and 4\* are used for determining gas flow rates, as necessary.
- (2) Concentration of affected VOCs in a gas stream shall be determined as follows:
  - (A) U.S. EPA Method 18\* is used for determining gaseous organic compound emissions by gas chromatography.
  - (B) U.S. EPA Method 25\* is used for determining total gaseous nonmethane organic emissions as carbon.
  - (C) U.S. EPA Method 25A or 25B\* are used for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis.
- (3) Performance test for control devices are as follows:
  - (A) For flares, the performance test requirements of 40 CFR 60.18(b\*) shall apply. Compliance with the requirements of 40 CFR 60.18(b)\* will be considered to represent ninety-eight percent (98%) control of the VOC in the flare inlet.
  - (B) For control devices other than flares, the VOC control efficiency shall be determined in accordance with [326 IAC 8-1-4](#) where the flow rate and VOC concentration of the inlet and outlet gas streams of the control device are measured as specified under subdivisions (1) and (2).
- (4) Vapor pressure shall be determined using standard reference texts or as specified in [326 IAC 8-9-3](#)(5).
- (5) Use U.S. EPA Method 21 for determining VOC leaks and for monitoring a carbon canister in accordance with SECTION 4(e)(4) of this document.
- (6) Use one (1) of the following for determining VOC concentration of wastewater samples:
  - (A) SW-846 Method 5030B (purge and trap) followed by SW-846 Method 8015B with a DB-5 boiling point (or equivalent column), and flame ionization detector, with the detector calibrated with benzene as required by 40 CFR 261\*.
  - (B) SW-846 Methods 3810, 5030B (followed by 8021B), 8260B, and 9060 as required by 40 CFR 261\*.
  - (C) U.S. EPA Methods 602, 624, 1624, 625, 1625\*.
  - (D) U.S. EPA Method 305\*.
  - (E) U.S. EPA Method 25D\*.

In the event of any conflict, U.S. EPA Method 25D\* takes precedence.

- (7) Flow rate measurements shall be taken at the same time as the concentration measurements.
- (8) Minor modifications to these test methods may be used, if approved by U.S. EPA. The approval shall occur when the department is informed, in writing, that U.S. EPA has no objections to the minor modifications to the test methods.
- (9) Test methods other than those specified in this SECTION may be used if validated by U.S. EPA Method 301\*.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

**SECTION 8. Record keeping.** The owner or operator of an affected industrial category shall comply with the following record keeping requirements:

- (1) Complete and up-to-date records shall be maintained as needed to demonstrate compliance with SECTIONS 4 and 5 of this document (relating to control requirements and alternate control requirements) that are sufficient to demonstrate the characteristics of wastewater streams and the qualification for any exemptions claimed under SECTION 3(2) of this document (relating to exemptions).
- (2) Records shall be maintained of the results of any inspection or monitoring conducted in

accordance with SECTION 6 of this document (relating to inspection and monitoring requirements). Records shall be sufficient to demonstrate proper functioning of applicable control equipment to design specifications to ensure compliance with SECTIONS 4 and 5 of this document.

(3) Records shall be maintained of the results of any testing conducted in accordance with SECTION 7 of this document (relating to approved test methods).

(4) All records shall be:

- (A) maintained at the source for at least five (5) years; and
- (B) made available upon request to U.S. EPA and the department.

**SECTION 9. Determination of wastewater characteristics.** The determination of the characteristics of a wastewater stream for purposes of this document shall be made as follows:

(1) The characteristics shall be determined at a location between the point of generation (as defined by this document) and before the wastewater stream is exposed to the atmosphere, treated for VOC removal, or mixed with another wastewater stream.

(2) The flow rate of a wastewater stream shall be determined on the basis of an annual average by one (1) of the following methods:

(A) The highest annual quantity of wastewater managed, based on historical records for the most recent five (5) years of operation, or for the entire time the wastewater stream has existed if less than five (5) years, but at least one (1) year.

(B) The maximum design capacity of the waste management unit.

(C) The maximum design capacity to generate wastewater of the process unit generating the wastewater stream.

(D) Measurements that are representative of the actual, normal wastewater generation rates.

(3) If the department or U.S. EPA determines that the VOC concentration cannot be adequately determined by knowledge of the wastewater, or by bench-scale or pilot-scale test data, the VOC concentration shall be determined in accordance with clause (C), or by a combination of the methods in clauses (A) through (C). VOC with a "Henry's Law Constant" less than  $1.8 \times 10^{-6}$  atm-m<sup>3</sup>/mole (0.1 y/x) at twenty-five (25) degrees Celsius shall not be included in the determination of VOC concentration. The VOC concentration of a wastewater stream shall be determined on the basis of a flow-weighted annual average by one (1) or more of the following methods:

(A) Knowledge of the wastewater. Sufficient information to document the VOC concentration.

Examples of information include the following:

- (i) Material balances.
- (ii) Records of chemical purchases.
- (iii) Previous test results.

(B) Bench-scale or pilot-scale test data. Sufficient information to demonstrate that the bench-scale or pilot-scale test concentration data are representative of the actual VOC concentration.

(C) Measurements. Collect a minimum of three (3) representative samples from the wastewater stream and determine the affected VOC concentration for each sample in accordance with SECTION 7 of this document (relating to approved test methods). The affected VOC concentration of the wastewater stream shall be the flow-weighted average of the individual samples.

(4) The annual affected VOC loading in wastewater for a wastewater stream shall be the annual average flow rate determined in subdivision (2) multiplied by the annual average affected VOC concentration determined in subdivision (3).

(5) The annual VOC loading in wastewater for a source shall be the sum of the annual VOC loading in wastewater for each affected VOC wastewater stream.

(6) The "Henry's Law Constant" shall be determined by the procedures in 40 CFR 60, Appendix J\*, as proposed on December 9, 1998, in the Federal Register\*.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

**SECTION 10. Maintenance wastewater requirements.** Each owner or operator of a source subject to this document shall comply with the following requirements for maintenance wastewaters containing VOC:

(1) The owner or operator shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair, such as a maintenance-turnaround, and during periods that are not shutdowns, such as routine maintenance. The descriptions shall specify the

following:

- (A) The process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities.
- (B) The procedures that will be followed to properly manage the wastewater and control VOC emissions to the atmosphere.
- (C) The procedures to be followed when clearing materials from the process equipment.
- (2) The owner or operator shall modify and update the information required by subdivision (1) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.
- (3) The owner or operator shall maintain a record of the information required by this SECTION.

**SECTION 11. Compliance.** (a) Except where otherwise specified within this document, any owner or operator of a source that is subject to this document shall comply with the requirements of this document by no later than:

- (1) April 1, 2011; or
  - (2) the date of initial startup of the waste management unit;
- whichever is later.

(b) For any emission control device that is used to comply with an emission control requirement of this document, the owner or operator shall demonstrate compliance by testing the emission control device in accordance with SECTION 7 of this document within ninety (90) days after the compliance date.

(c) For any treatment process (or combined treatment processes) that is used to comply with this document, the owner or operator shall demonstrate compliance by testing the treatment process (or combined treatment processes) in accordance with the methods in SECTION 7 of this document within ninety (90) days after the compliance date.

(d) Additional testing of the emission control device or the treatment process in accordance with SECTION 7 of this document may be required by the department to ensure continued compliance.

(e) In the event the owner or operator reduces the sources potential to emit under SECTION 1(b) of this document, the date on which the source subsequently meets the applicability criteria of SECTION 1(a) of this document is the date the source becomes subject to this document.

**SECTION 12. A variance request from the requirements of this document shall be made in accordance with [IC 13-14-8-8](#).**

**SECTION 13.** This document expires on the effective date of LSA [Document] #09-222 or ninety (90) days after filing with the publisher, whichever takes place first.

*LSA Document #09-699(E)*

*Filed with Publisher: September 3, 2009, 2:18 p.m.*

*Posted: 09/16/2009 by Legislative Services Agency*

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